SUPPLEMENTAL MOVIES

Video S1, Related to Figure 1. Hippocampal neurons were transfected with APP-mCherry, stained for neurafascin (axon; not shown) and imaged by shallow angle TIRF microcopy. First frame shows image without adjusted levels, which are required for visualizing vesicle movement. Green arrows point to vesicles entering dendrites and reversing back to the cell body. Time indicates minutes:seconds. Scale bar, 10 μm.

Video S2, Related to Figure1. Hippocampal Neurons were transfected with LDLR-YFP and stained live for neurofascin (not shown) to distinguish the axon from dendrites. Time-lapse imaging was performed with shallow angle TIRF microcopy. First frame shows image without adjusted levels, which are required for visualizing vesicle movement. Blue arrow points to the axon. Green arrows point to vesicles that move processively in the anterograde direction (away from the cell body) upon entering dendrites. Time indicates minutes:seconds. Scale bar, 10 μm.

Video S3, Related to Figure1. Hippocampal neurons were transfected with PEX-GFP-FKBP and KIF5B(1-807)-FRB. Neurons were stained live for neurofascin (not shown) to distinguish the axon from dendrites and treated with rapalog (2μM). Time-lapse imaging was performed with shallow angle TIRF microscopy. Movie shows the motility of KIF5B-driven peroxisomes immediately after rapalog addition. Blue arrow points to the axon. Green arrows highlight vesicles entering dendrites and reversing back towards the cell body. Time indicates minutes:seconds. Scale bar, 20 μm.

Video S4, Related to Figure 1. Hippocampal neurons were transfected with PEX-GFP-FKBP and KIF1A(1-489)-FRB. Neurons were stained live for neurofascin to distinguish the axon from dendrites and treated with rapalog (2 μM). Movie shows the motility of KIF1A-driven peroxisomes in dendrites immediately after rapalog addition. Green arrows point to vesicles moving in the anterograde direction upon entry into dendrites. Time indicates minutes:seconds. Scale bar, 20 μm.